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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,651	02/14/2002	Jeremy Alan Arnold	ROC920010318US1	9372

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EXAMINER
WU, YICUN

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/075,651	ARNOLD ET AL.
	Examiner	Art Unit	
	Yicun Wu	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 October 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-12 and 14-45</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) <u>10,11 and 40-45</u> is/are allowed.

6)☒ Claim(s) <u>1-4,6-9,12,14-39</u> is/are rejected.

7)☒ Claim(s) <u>5</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

III. DETAILED ACTION

1.   Claims 1-12 and 14-45 are presented for examination.

Response to Applicant' Remarks

2.   Applicant argues:

(1) "These prior art patents are not concerned with databases."

(2) "There is no teaching or suggestion in Probert that the monitor of access requests performs the function of a database optimizer."

(3) A docfile allocation structure is not part of a database and is not a database schema".

(4) "statistics are not used to optimize the performance of accessing data in the database in Probert not Khoyi.

(5) does not teach or suggest anything about storing the same data in a database or in a database column.

Examiner disagree.

With respect to the 1st argument, the Examiner consider "When applications open files, or database records, or other persistent information containers." Probert, Jr. et al.Col. 10, lines 5-7) do concern with databases.

With respect to the 2nd argument, the Examiner consider

"a filter driver may keep a file in different formats

depending on its access history, optimizing for the most

common access, or using a private internal format that

isn't exposed to applications." Probert, Jr. et al.Col. 10,

lines 5-7) performs the function of a database optimizer.

With respect to the 3rd argument, the Examiner consider

"persistent application data is stored in different

formats", Probert, Jr. et al.Col. 1, lines 35-37), so a

docfile allocation structure is part of a database and is a

database schema.

With respect to the 4th argument, the Examiner consider

"The filter driver may change the format that

information is stored in based on access history" Probert

abstract and "statistics". Probert Fig. 5 and "a filter

driver may keep a file in different formats depending on

its access history, optimizing for the most common access,

or using a private internal format that isn't exposed to

applications." Probert, Jr. et al. Col. 10, lines 5-7)

shows that statistics are used to optimize the performance

of accessing data in the database in Probert.

With respect to the 2nd argument, the Examiner consider

"a filter driver may keep a file in different formats

depending on its access history, optimizing for the most

common access, or using a private internal format that

isn't exposed to applications." Probert, Jr. et al.Col. 10,

lines 5-7) performs the function of a database optimizer.

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its access history, optimizing for the most common access,

or using a private internal format that isn't exposed to

applications." Probert, Jr. et al. Col. 10, lines 5-7)

shows that statistics are used to optimize the performance

of accessing data in the database in Probert.

With respect to the 5th argument, the Examiner consider

"The stored form of the information may be converted

to an intermediate format" and "The filter driver may also

keep a file in different formats" (<u>Probert, Jr. et al.</u> Col.

4, lines 5-17) clearly teach storing the same data in a

database or in a database column. Clearly, there is more

than one format of the same data.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine,
manufacture, or composition of matter, or any new and useful
improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

3.   Claims 12, 14-28 are rejected under 35 U.S.C. 101
because the claims are directed to a non-statutory subject
matter, because they merely recite a number of computing
steps without producing any tangible result and/or being
limited to a practical application within the technological
arts. The use of a computer has not been indicated. These
claims do not indicate use of hardware on which the
software runs to perform the steps recited in the body of
the claim. Software or program can be stored on a medium
and/or executed by a computer. In other words the software
must be computer-readable. The use of a computer is not
evident in the claim. MPEP 2106.IV.B.1(a) refers to
"computer-readable" medium with computer program encoded on
it."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-4, 6-9, 12, 14-16, 18-19 and 29-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Probert, Jr. et al. (U.S. Patent No. 6,745,176) in view of Khoyi et al. (U.S. Patent No. 5,226,161).

As to claims 1 and 12, Probert, Jr. et al. discloses an apparatus comprising:

at least one processor (fig. 1);

a memory coupled to the at least one processor (fig. 1); and

a database optimizer residing in the memory and executed by the at least one processor (i.e. monitor access requests. Fig. 5),

the database optimizer using statistics (i.e.

statistics. Fig. 5) regarding the type of applications

accessing data in a database (i.e. format. Fig. 5),

the frequency with which the applications access the

data (i.e. statistics. Fig. 5), and

data being accessed by the applications to make at

least one change to the database schema (i.e. generate

docfile allocation structures. Fig. 4) to optimize the

performance of accessing data in the database (fig. 4).

Probert, Jr. et al. does not explicitly teach the

location of the data.

Khoyi et al. teaches the location of the data (col.

11, lines 20-25 and col. 3, lines 10-40).

Therefore, it would have been obvious to a person

having ordinary skill in the art at the time the invention

was made to have modified Probert, Jr. et al. with the

location of the data.

It would have been obvious to a person having ordinary

skill in the art at the time the invention was made to have

modified Probert, Jr. et al. by the teaching of Khoyi et

al. because providing the location of the data allows

addition of new applications and data types if they do not

fit within the applications and data types initially
envisioned and defined as taught by Khoyi et al. (col. 2,
lines 10-17).

As to claims 2 and 14, Probert, Jr. et al. as modified
teaches an apparatus wherein

the database optimizer makes the change to the
database schema according to a set of rules that specify a
preferred data type for each type of application accessing
data in the database (i.e. docfile and NSS format. Probert,
Jr. et al. Fig. 4).

As to claims 3 and 15, Probert, Jr. et al. as modified
teaches an apparatus wherein the change to the database
schema comprises

changing the data type of at least one column in the
database (i.e. docfile and NSS format. Probert, Jr. et al.
Fig. 4).

As to claims 4 and 16, Probert, Jr. et al. as modified
teaches an apparatus wherein the change to the database
schema comprises

adding a new column of a second data type to the

database that contains the same data in an existing column

of a first data type in the database (i.e. docfile and NSS

format. Probert, Jr. et al. Fig. 4).

As to claim 6, Probert, Jr. et al. as modified teaches

an apparatus wherein

the database optimizer receives requests from at least

one application to access data in the database (Probert,

Jr. et al. Col. 3, lines 15-25), and

returns data from the database of a data type that is

expected by the requesting application (i.e. format a

program expects. Probert, Jr. et al. Col. 3, lines 15-25).

As to claim 7 and 19, Probert, Jr. et al. as modified

teaches an apparatus wherein the database optimizer further

comprises

a run time statistics gathering mechanism to gather

the statistics (i.e. statistics. Fig. 5).

As to claims 8 and 18, Probert, Jr. et al. as modified

teaches an apparatus wherein the database optimizer

operates according to customization settings set by a human

user   (<u>Probert, Jr. et al.</u> Fig. 1, 5 and col. 6, lines 30-

35).

As to claim 9, <u>Probert, Jr. et al.</u> as modified teaches

an apparatus wherein the database optimizer further

comprises

a data type conversion mechanism that converts data in

a first data type retrieved from the database to a second

data type that is preferred by an application requesting

the data (i.e. docfile and NSS format. <u>Probert, Jr. et al.</u>

Fig. 4).

6.   As to claims 29-39, the limitations of these claims

have been noted in the rejection above. They are therefore

rejected as set forth above.

Allowable subject Matter

7.   Claims 10-11 and 40-45 are allowed over the prior art made of record.

8.   Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9.   **THIS ACTION IS MADE FINAL**, Applicant is reminded of

the extension of time policy as set forth in 37 CFR

1.136(a).

A shortened statutory- period for reply to this final

action is set to expire THREE MONTHS from the mailing date

of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the

advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened

statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR

1.136 (a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory

period for reply-expire later than SIX MONTHS from the

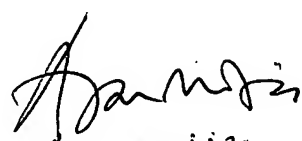mailing date of this final action.

Points of contact

10.   Any inquiry concerning this communication or earlier
communications from the examiner should be directed to
Yicun Wu whose telephone number is 571-272-4087. The
examiner can normally be reached on 8:00 am to 4:30 pm,
Monday -Friday.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, Jeffrey Gaffin can
be reached on 571-272-4146. The fax phone numbers for the
organization where this application or proceeding is   ı
assigned are 571-273-8300.

Any inquiry of a general nature or relating to the
status of this application or proceeding should be directed
to the receptionist whose telephone number is 571-272-2100.

Yicun Wu
Patent Examiner
Technology Center 2100

December 20, 2005